

PSEUDORABIES

September 2007



Introduction - Pseudorabies is disease caused by a virus, which primarily affects swine but is occasionally transmitted from pigs to cattle, sheep, goats, dogs, cats, and wild animals. It is also known as Aujeszky's disease and "mad itch". **The disease is not related to rabies.** The term pseudorabies was coined because the disease may resemble rabies.

Cause - Pseudorabies virus (Herpes family).

Spread of Disease - Pigs are the only known natural reservoirs for the virus. **The virus has the ability to produce latent, or clinically inapparent infections. Therefore, pigs showing no signs of disease may be capable of transmitting the infection.** Infection is usually transmitted between pigs by nose-to-nose contact because virus is present in the nasal and oral discharges of infected pigs. Consequently, contaminated drinking water and feed buckets may transmit the disease. Other less common methods of transmission include: free-moving infected animals (dogs, cats, or wildlife that travel from farm to farm); people carrying the virus from contaminated to clean premises on their boots, clothing, or bodies; artificial insemination; breeding; and by feeding feedstuffs contaminated with tissues from infected animals. Aerosol spread, under ideal conditions, has been shown to occur over distances of 20 yards.

The virus is unstable outside of the animal body and survival of the virus in the environment is dependent on temperature, humidity, and pH. The virus is very susceptible to pH levels below four and above nine and temperatures slightly below freezing. Survival of the virus in infectious dosages outside the animal host is likely to be very limited, thus nose-to-nose contact is the primary means of transmission.

Development of Disease - The severity and types of clinical signs depend on the species. Species other than pigs typically show severe nervous system signs due to the brain inflammation caused by the virus. Signs may be similar to rabies and include abnormal gait, intense scratching, self-

mutilation, and convulsions. With few exceptions, death follows within a few days of the onset of signs.

Signs in pigs vary from inapparent infection to sudden death and depend on the age and immune status of animal at the time of infection, the virus dose, route, and strain. Young pigs may be severely affected with 100 percent mortality in pigs under two weeks of age. Sudden death may occur, or fever, loss of appetite, convulsions, and paddling may precede death. Piglets born from dams either previously vaccinated or immune from natural infection may show less severe signs. The severity of clinical signs decreases with age and older pigs may only experience fever and inappetence of a few days duration. Pregnant females may reabsorb their litters or deliver mummified, stillborn, or weak piglets. The outcome depends on the sow's stage of gestation when infected.

Identifying Infected Animals - Animals displaying clinical signs of pseudorabies should be examined by a veterinarian. Other diseases may produce similar signs and the veterinarian will perform a physical examination to determine the possible causes. The most widely used method of identifying animals affected with pseudorabies is by blood test for the presence of antibodies against pseudorabies virus.

Diagnosis - Identification of the virus in infected tissues is the absolute confirmation of infection. However, presence of antibodies to pseudorabies virus, in the absence of virus identification, is indicative of past exposure and warrants concern.

Treatment - Pseudorabies is a viral infection and, therefore, antibiotics have no effect.

Control and Prevention - Herd biosecurity is critical in preventing pseudorabies. New additions should come from a pseudorabies negative herd and be held separate for 30 days and blood tested prior to introduction. Do not add feeder pigs from an outside source if you have a breeding herd. Keep visitors to a minimum and provide them with clothing

and sanitized boots or disposable overshoes prior to their entering your facility. Change clothes and disinfect your boots after delivering pigs to a livestock market or exhibit, and after visiting other swine facilities. Vermin should be controlled. Do not use swine equipment, such as liquid manure wagons or trailers, in partnership or custom hire without first completely washing and disinfecting them. Pseudorabies virus can be inactivated by cleaning and disinfecting environmental surfaces with phenolic compounds, quaternary ammonium compounds, chlorhexidine diacetate, iodines, and 5 percent sodium hydroxide. Your veterinarian can provide you with specific recommendations regarding biosecurity.

If a herd is found to be infected, federal and state veterinarians will assist the owner in the development of a herd plan to eradicate the disease on the facility. Herd plans may include test and removal of infected animals, depopulation and repopulation, and offspring segregation. Vaccines may be used to control the spread of the disease. Animal movements into and out of the facility will be traced to determine the source of the infection and identify any facilities and animals that are at risk of exposure to disease.

Zoonotic Potential - Zoonotic disease can be spread from animals to people. Pseudorabies is a very rare zoonosis and may produce a mild, limited disease of one to two day's duration. People may get infected by traumatic inoculation of infectious materials on the farm or in the laboratory. Accidental inoculation may occur when veterinarians necropsy an infected animal, when farmers attempt to treat animals, or when laboratory workers are involved with isolating the virus. There may be an intense itching at the site of inoculation, which may be associated with headache, muscle soreness, and malaise. If you believe that you have been exposed to this or any other zoonotic disease, seek medical attention promptly.

Meat from pigs that passes inspection is safe and wholesome for human consumption.

For additional information, contact the Animal Health Branch at:

CDFA Animal Health Branch Offices	
Sacramento (HQ)	916-654-1447
Modesto	209-491-9350
Ontario	909-947-4462
Redding	530-225-2140
Tulare	559-685-3500
USDA/APHIS/VS 916-854-3900 or 877-741-3690	

or visit the National Pork Board Web site at:

<http://www.pork.org/PorkScience/SWineHealth/Factsheets.aspx>